

Remarks

As noted in the earlier amendment, claims 7, 9 and 17 were previously amended to obviate the dependency objection set in the Official Action. Moreover, the rejection of claims 42-46 and 50 under 35 USC § 112 were previously obviated by amendment of the preamble of Claim 41.

Applicant's Amendments as to Form.

As previously stated, Applicant is amending the claims to more distinctly claim his invention and to further assist the Examiner in understanding the board scope inventions. Such amendments are not made for the purpose of limiting the scope of the claims, are not necessitated by statute, by the prior art or by the Examiner's Official Action.

Applicant's Further Response to Rejections.

Claims 5-7 and 16-24 are directed to method or apparatus claims for obtaining a spectral distribution or fingerprint of objects such as a plant on a distant farm, immediately transmitting that fingerprint to a laboratory for spectral analysis by a computer and its databases so as to quickly and efficiently learn of the plant's needs such as its needs for herbicides, fertilizers, etc. Similarly, a spectral fingerprint of a patient's diseased tissue can be quickly transmitted from a surgical operating room to a computer in a pathology laboratory for fast identification of a cancer and its type. Importantly, nothing in the art discloses or suggests such methods or procedures that would provide needed, immediate analysis to a farmer whose crops may be subject to a fungus or to a surgeon who can quickly and effectively utilize such information.

Another limitation added to the dependent claims 6 and 19 is the target light for aiming or targeting the point, line or area to the object from which the spectral fingerprint is taken.

In considering these claims, the Examiner's attention is drawn to the preamble of each. As written, the preambles and their limitations form a part of the claimed inventions, both as a matter of law and as a matter of the Applicant's intention. *See Rapaport v. Dement*, 254 F.3d 1053, 59 USPQ2d 1215, 1217 (Fed. Cir. 2001) and *Catalina Marketing International Inc. v. Coolsavings.Com Inc.*, 289 F.3d 801, 62 USPQ2d 1781, 1785 (Fed. Cir. 2002). Significantly, the prior art fails to disclose or teach the limitations of the preambles or of the body of the claims. Indeed, Applicant, on this record, is the only person to perceive the problem of early spectral analysis of plant and animal tissue, of the need and benefits of such results, or of a means to accomplish them. Clearly, Applicant has provided a substantial contribution—and he is entitled to an allowance of his claims.

Claims 10 - 12, 13 - 15, 25 - 32 and 47 - 50 are directed to a comparison of or determination of the similarity of two objects. This simple apparatus and the limitations of these claims are not to be found in the art. Instead, the prior art focuses upon the development of an expensive data base containing spectral images of a plurality of objects, storage of those images into a memory and subsequent comparison of the data base color distributions with one object. Contrary to this art, Applicant discovered the need for a comparison of one object with another object and developed a simple low cost method and apparatus of doing so. For example, Applicant's claimed device can sort objects such as tomatoes based on a first sample tomato that a user might wish to select from a larger population. The costly development of a data base and substantial memory for containing the data base as well as access times as been obviated by the inventions of claims 10 – 12, 13 – 15, 25 - 32 and 47 – 50.

Applicant's discovery, as recited in these claims also recites low cost elements such as an algorithm which may be a regression analysis run by a low cost application specific integrated

circuit or an embedded system that has very different elements and requirements than a general purpose personal computer. The use and selection of these low cost elements is not anticipated by the prior art. Similarly, the discovery of the need of sorting based on a sample, rather than a data base, is not anticipated or rendered obvious by the art.

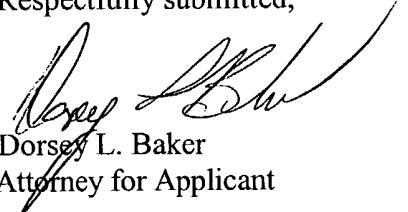
Claims 33- 40 have an aiming light or beam that aims the units towards a point, area or line of the object to be fingerprinted. Such is of particularly value in those instances where a specific point, line or area of the object must be spectrally fingerprinted. And it is even of more value where the object to be fingerprinted is large and bulky and cannot be easily moved. The art of record contains no disclosure of such a device. At best, the art of record depicts the opposite, i.e., the movement of the object, not the sensor, so that its reflected light is properly received by the sensor. See *Kelderman* in which the object is rotated by motor 16.

Claims 41 - 45 and 51 - 53 recite a low cost identifier apparatus that includes a logic circuit having an imbedded regression algorithm for making comparisons and identifications. The ability of this claimed device to accomplish such comparisons with a simple integrated circuit, regression algorithm and controller chip eliminates the need for a general purpose or personal computer to perform such functions. Importantly, and as recited in claim 42, the entire invention can be accomplished with a Digital Signal Processor and its on board memory. Clearly, these features and the resulting potential benefits of portability, low cost, high speed are novel and unobvious.

In sum and substance, Applicant's invention began with a novel and unobvious method of identifying and selectively applying a herbicide to unwanted plants in a field. The Official Action of July 21, 2003 recognizes those contributions as meeting all of the requirements of patentability. The additional remaining claims and inventions extend to additional novel and

non-obvious methods and devices, and in some part, carry forward his inventions to additional applications. These claims also meet the requirements of patentability and due notice of allowance is solicited.

Respectfully submitted,


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